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ABSTRACT

The reasons teachers give for their assessment and grading practices and the factors that influence these practices were studied. Of 200 elementary and secondary mathematics and English teachers who volunteered to participate, researchers selected 60 teachers as representing maximum variation and then interviewed 24. Interview transcripts were coded for analysis. The data analysis resulted in a tentative model that explains how and why teachers decide to use specific assessment and grading practices. Six themes were identified in the model: (1) teacher beliefs and values; (2) classroom realities; (3) external factors; (4) teacher decision making rationale; (5) assessment practices; and (6) grading practices. The main tenet of the model holds that there was tension between teachers' internal beliefs and values and the realities of the classroom and other external factors imposed on them. The most salient internal factor was the teacher's philosophy of teaching and learning. The major external factors were identified as mandated statewide learning factors and high stakes tests, district grading polices, and parents. Results show that teachers are constantly striving to reach a reasonable balance between their beliefs about education and learning and the realities of the classroom environment and external context. Contains 14 references.) (SLD)

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Teacher Classroom Assessment and Grading Practices Decision Making

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Introduction

Previous research documents that teachers tend to award a "hodgepodge grade of attitude, effort, and achievement" (Brookhart, 1991, p. 36, 1993, 1994, 1997; Cross & Frary, 1996; Troug & Friedman, 1996). It is also clear that teachers use a variety of assessment techniques (Cizek, Fitzgerald, & Rachor, 1995; Frary, Cross, & Weber, 1993), and that established measurement principles are often violated (Cross & Frary, 1996; Frary et al., 1993; Plake & Impara, 1993, 1997; and Stiggins & Conklin, 1992). Why is this the case? Why, for example, do teachers combine effort with achievement in grading? What explains the reasoning process of teachers concerning their assessment and grading decisions? What affects teacher decision making about assessment and grading?

It is also generally accepted that effective teaching is guided by a process of decision making. Indeed, Shavelson (1973) identified decision making to be the basic teaching skill. Several models of teacher decision making have been presented in the literature (Wilen, Ishler, Hutchinson, & Kindsvatter, 2000). While none of these models address assessment and grading practices directly, the general elements may be applicable. For example, the nature of predisposing awareness, knowledge, and attitudes provide the basis for decision making. These teacher beliefs and dispositions are an essential part of models of instructional decision making. Thus, beliefs about learners, curriculum, subject matter, educational goals provide a foundation for decision making. It has also been found that teachers incorporate information or cues about students. An objective of the current study is to investigate whether the same or similar elements are important when teachers make decisions about assessment and grading.

Some research on assessment and grading practices identifies teachers' belief systems that influence decision making. A study by Stiggins, Frisbie, and Griswold (1989) found that teachers wanted their grades to both fairly reflect student effort and achievement, as well as to motivate students. Contrary to recommended practice, it was found that teachers value student motivation and effort, and set different levels of expectation based on student ability. This is consistent with other research that has found that teachers believe it is important to combine nonachievement factors, such as effort, ability, and conduct, with student achievement, to determine grades.

The current study, then, was designed to more fully and directly explore the reasons teachers give for their assessment and grading practices and the factors that influence these practices. In depth interviews were conducted with classroom teachers to address the following foreshadowed questions:

1. What is the nature of teacher decision making concerning classroom assessment and grading practices?
2. What influences teacher decision making concerning classroom assessment and grading practices?
3. What justification do teachers give for their classroom assessment and grading practices?

Methodology

Participants

Participants for the study were identified from a sample of over 700 elementary and secondary mathematics and English teachers who had responded to a written survey that described their classroom assessment and grading practices. On the survey, teachers volunteered to participate in interviews concerning their assessment and grading practices. Approximately

200 teachers volunteered. Survey responses that represented maximum variation were selected for the interviews (answering "not at all" to "completely" in describing 35 assessment and grading practices). Sixty teachers were identified as representing maximum variation. Twenty four of these 60 teachers participated in the interviews (one-fifth grade teacher, 10 English teachers, and 13 mathematics teachers from thirteen schools in seven school districts).

Interview Protocol and Process

Four members of the research team conducted face-to-face interviews. Twenty of the interviews were tape-recorded, and interviewer notes were taken during and after the interviews. Interviews lasted 45 to 60 minutes and took place in the teachers' schools. An interview guide was developed by the research team prior to the interviewing process. It was used in four pilot interviews and revised by the team prior to completing the sample of 24 interviews.

Data Analyses

Each tape-recorded interview was transcribed onto approximately 8 to 14 pages of single-spaced typed text. The text was then loaded into HyperRESEARCH qualitative software. The data were then coded according to the emerging topics of the interviewees, as well as the pre-established topics identified in the interview guide. Forty-nine categories were initially identified and frequency counts were tallied for each. Through a process of triangulation, ten other categories were later identified and added to the data analysis process. As a validity check, 50% of the coded transcripts were peer reviewed by a MERC associate to determine agreement on the selection of codes assigned to chunks of data. Of 520 coded responses assigned to the data by the researcher, the peer reviewer agreed with 450 of them. This resulted in an 87% rate of agreement between the researcher and the peer reviewer.

Following coding, research team members reconvened to review the coding/categorizing and the categories were then organized into five themes that explained the data. In addition, individual case studies for twenty of the twenty-four interviews were conducted. Unique characteristics and commonalities both within each case and across cases were found. Ten new categories were identified as distinct and unique entities accounting for some of the observed teacher variance in responses. As a result, the original data interpretations were verified and one more pervasive theme was added to the model. Table 1 shows the categories identified throughout the data analysis and verification process that were subsequently used as results, as well as their frequencies. Individual responses were used in more than one category where appropriate. These categories were then synthesized to best explain the most important aspects of each of the six themes. Thus, the explanatory categories do not exactly match the categories derived from coding.

Table 1 here

Table 1

Coding for Major Themes and Category Frequencies

Themes												
Teacher Beliefs and Values		Classroom Realities		External Factors		Decision Making Rationale		Assessment Practices		Grading Practices	
Category	***f***	**Category**	***f***	**Category**	***f***	**Category**	***f***	**Category**	***f***	**Category**	***f***
Student motivation	57	Class type	34	High stakes tests	54	Assessment rationale	53	Objective assessments	21	Student effort	22
Effort vs. ability	24	Social promotion	5	Standardized tests	4	Homework	4	Ongoing assessments	9	Quizzes	25
Modify assessments for special students	18	Attitudes/behaviors	18	District grading policies	12	Assessment that drives lesson plans	9	Publisher-made assessments	8	Recall knowledge	21
Pulling for students	39	Absenteeism	13	Parent challenges to grades	12	Grading rationale	25	Revision of assessments	23	Extra credit	21
Empathy/caring	20	General level students in college-prep classes	5	Other teachers' grading practices	12	Assessment modifications	13	Teacher-made assessments	7	Borderline grades	18
At-risk student motivation	12	Mainstreamed students	12			Worth and value of assessments	6	Informativeness of assessments	30	Zeros	22
Cheating/copying work	9	Test anxiety	9			Influences on modes of teaching	17	Timing of assessments	7	Grade distributions	36
		Home environment	28			Lesson plans drive assessments	27	Choice of assessments	10 7	Grading policy	50
								Formal/informal	11	Feedback	46
								Preassessments	40	Grades	29
										Group work	8

Findings

A Model of Factors Influencing Teacher Assessment and Grading Practices Decision Making

The data analyses resulted in a tentative model that explains how and why teachers decide to use specific assessment and grading practices. Six themes were identified in the model: 1) teacher beliefs and values, 2) classroom realities, 3) external factors, 4) teacher decision making rationale, 5) assessment practices, and 6) grading practices. The main tenet of the model holds that there was tension between the internal beliefs and values of teachers and the realities of their classroom environments and other external factors that are imposed on them. This tension was apparent in the explanations teachers gave for their assessment and grading practices. Such practices were influenced most heavily by internal beliefs and values that were frequently idiosyncratic, reflecting teachers' philosophies of education. One major belief, for example, was the need for flexible assessment and grading practices so they can accommodate individual students. As a result, there was variation in teacher decision making rationales resulting in individualized justifications for the types of assessments used and the grades assigned to a student. External pressures, especially those related to recent statewide mandated testing, influenced teachers to use more objective assessment and grading practices. These factors are considered to be accountable (to systems, parents and students), with their end result revealing an "objective" way of assessing student performance. Greater tension arises when external pressures increase, and lessens as teachers gain professional experience.

Figure 1 illustrates the model of teacher decision making. It shows how the decision making process is influenced by teacher beliefs and values, classroom realities, and external

factors, leading to rationales for specific assessment and grading practices. Each of the six major components of the model will be examined an explained.

Figure 1 here

Teacher Beliefs and Values

The most salient internal factor that appears to influence teacher decision making concerning classroom assessment and grading practices is the teacher's philosophy of teaching and learning. This internal set of values is important because it provides a rationale for using assessment and grading practices that are most consistent with what the teacher believes is most important in the teaching/learning process. For many of the teachers, the philosophy of learning was focused on doing whatever was needed to help students succeed, to "pull for students." In extreme cases, this meant significant modifications of the assessments, such as writing multiple forms of tests to accommodate different students' needs and abilities, allowing creative expressions such as artwork to substitute for regular paper and pencil tests, and allowing students to veto certain types of test questions if they felt incapable of responding to them. Other teachers were less accommodating but still indicated a philosophy based on student success. These teachers, for example, would accept late work or revisions of work.

Essentially, it's as if assessment and grading practices are whatever will best serve the purposes that are linked to a larger, more encompassing philosophy of education. For example, teachers believed that students need to be meaningfully engaged in learning, and would use assessments and grading factors that would enhance this engagement. Five types of teacher beliefs and values were identified from the categories: Philosophy of teaching/learning, pulling for students, promoting student understanding, accommodating individual differences, and student engagement and motivation.

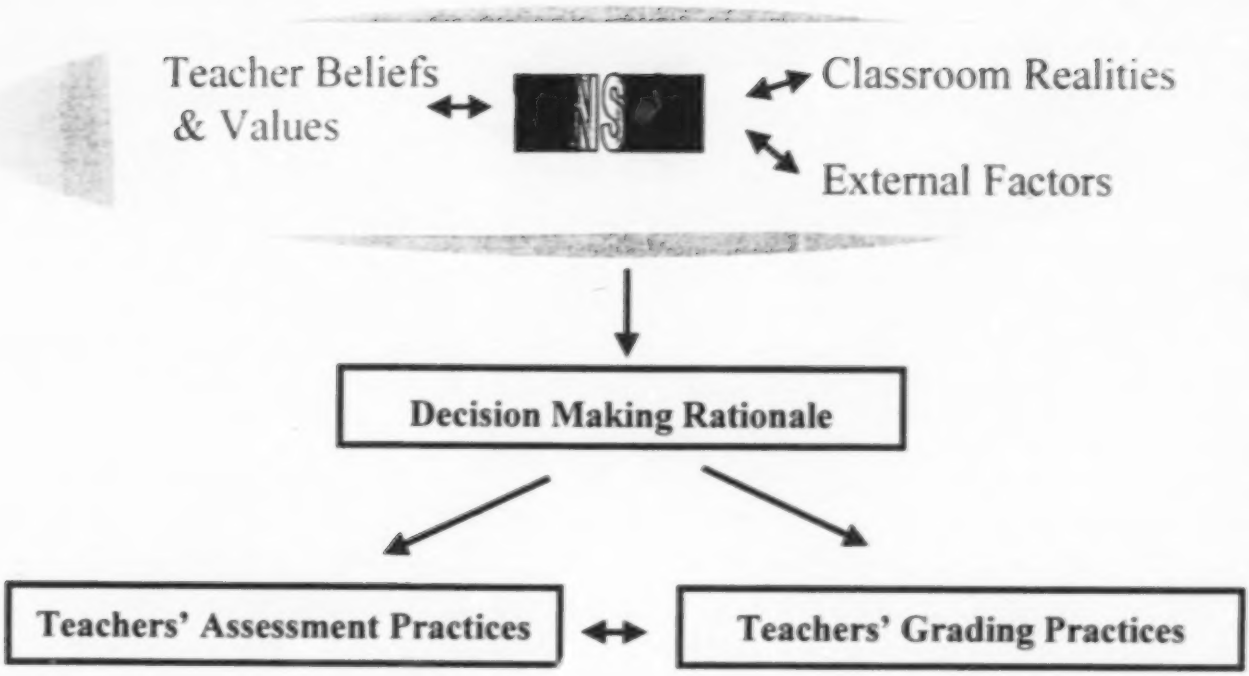

Figure 1. A Model of Teachers' Assessment and Grading Practices Decision Making.

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Philosophy of Teaching/Learning While teachers did not use the phrase "my philosophy of teaching and/or learning," it was clear that when trying to explain their decision making they relied on foundational beliefs and values about education. Note how the following excerpts from the teachers frame their assessment and grading practices in a larger philosophy of teaching/learning:

- I weigh more on homework …there are worksheets that I use. And to me, my philosophy of education is run by Dewey. The more you practice something the better, the more proficient you become in that skill.
- The daily grades are my way of making sure that they continue this process like it's supposed to be. If they haven't done the daily things that I've asked them to do then they are not going to be able to do that end result.
- I always assess early on to see what people know so that I could split groups and remediate or accelerate as needed.
- To me grades are extremely secondary to the whole process of what we do. I have goals to what I want to teach and I use assessment so that I know what I need to work on. What people have mastered and what they haven't.

Pulling For Students For most of the teachers it was evident that they wanted very much for students to succeed and to obtain good grades. We have labeled this value "pulling for students." It is manifest in assessment and grading practices that are designed to give students the best opportunity to be successful. In some cases it almost appeared as if teachers were using specific practices so students could lessen the impact of low test scores. Working within the constraints of the grading system, teachers wanted very much for students to do well. Here are some illustrations of this tendency:

- Maybe this is the dedicated teacher's syndrome or whatever. I'll chase the kid around for a long time so I can get a few points.
- I'm always trying to find some ways so that all the children can find success, not just Johnny and Suzy getting the A but also Sally and Jim can get an A also.
- Everybody takes the quiz but the way I record the grade is only the good grades. If you don't get a B or better then I don't record it.

- I also try to give opportunities and assess them in different types of ways and give them the opportunity to, if they blew something, … I give them the opportunity to make up points or get bonuses.
- When we do tests and quizzes I'll divide them into sections so each of my learners will have at least one area on the quiz or test where they'll be able to shine.
- I never tell them this but when I do that average I'll add an extra 5 points to everybody, and as far as borderline is concerned, most of the time I round up.

Promoting Student Understanding An important component of the philosophy of teaching/learning is to gauge student progress by using assessment to check for student understanding. This came up many times in the teachers' responses. They are very concerned about getting students to the point where they truly comprehend and understand, not merely memorize.

- It's not only me lecturing and then they soak it in and then regurgitate back to me. I always tell them that I could train a monkey to do that if I give them enough bananas. That's not what education is, that's not my goal here. My goal is that you can understand it, so you need to participate.
- You want to know, what have they really learned or can they apply it … to get a more realistic grade of what the student really does know about the material.
- The assessments where students actually have to show me some work or write about are most valuable for informing me about how much students know. Because it's then that you know that they understood every process that tells you more about a student than just grading a sheet of answers.
- Big tests and essays best because this is where higher levels of thinking come in.
- I go back to the ultimate, I don't care how I get them there, I want them to learn it. And if it means I will give you 2 more points for this if you go back and fix it and get it right … if I have to dangle that carrot to get them there … I'll get them there.

Accommodating Individual Differences Among Students Another aspect of assessment that appeared linked to philosophy were the efforts teachers made to provide varied assessments that met a variety of learning styles. They did not indicate that they used varied assessments for psychometric reasons, even though obtaining valid evidence resulted. This is, again, part of a larger philosophy of education – that individual differences among students are important and need to be considered – in all aspects of teaching, including assessment and grading. What

teachers did was to modify assessments on the basis of student characteristics. Following are some illustrative quotes:

- I think it'll go back to the goal I have: try to meet the needs, interests, capabilities of the children. If you don't have a variety of things, you're not really focusing on what that child's ability is.
- I will have at least two versions of any given test or assessment … there are always three versions and most often four depending on who I have in my class … and I think it is very important to do it … I always have several ways [of assessing].
- Some students do better on paper than they do orally, some students do terrible on paper but you know that they know it so you have to come up with a way to say show me what you know. My philosophy is I'm trying to get them to show me what they know, not trick them into showing me what they don't know.
- I feel that kids learn in all different ways, and they have different ways of showing it.
- They [assessments] change based on the needs or capabilities of the students. I'll make some tests easier and some harder, depending on the ability level of the student.
- The types of quizzes do vary .. I try to accommodate. I wouldn't put as many formal proofs on their quizzes or tests as I would with an honors class.

Student Engagement and Motivation Teachers clearly indicated that it is imperative for students to be actively engaged in learning, and, hopefully, motivated to do their best work. This engagement and motivation was seen as critical to the learning process. Consequently, teachers based their assessment and grading practices decisions on what would result in the greatest amount of student engagement and motivation. As will be pointed out later, this resulted in using many constructed-response assessment items and a fairly heavy emphasis on homework. Here are some quotes from teachers that illustrated the importance of engagement and motivation:

- If you really want a student to learn, the student has to be actively engaged … and doing group work … I find that works best.
- Everybody has to be involved in this, not just those who look like they are falling asleep, but everybody … we'll continue until everybody has their chance.
- Students learn more when students are actively engaged. Daily grades are based on participation in groups.
- Students need to be task oriented and organized.

- It's worth a few extra points in their grade because it means that everybody in the whole school triangle [student, parents, teacher] is involved in their education.
- Use essays to get them engaged, to motivate them.
- I use a goody jar … it's not really assessment … but really helps me in my assessment, especially with kids with low motivation.

Classroom Realities

Classroom realities were those elements of the classroom environment teachers dealt with to encourage students to engage in and become responsible for their own learning. In many instances, in contrast to the teachers' philosophy about assessment and grading practices, the reality of the classroom environment directly impacted assessment and grading practices. Teachers repeatedly expressed frustration with accommodating their assessment and grading practices to account for students with inadequate home environments, for limited effort/inappropriate attitudes and behaviors, for mainstreaming, for social promotion of general students in college-prep classes, for test anxiety, and for excessive absenteeism. Here are examples of how such factors influenced decision making:

- Andrea had always been the troublemaker. All of a sudden, she was the answer maker. And, Andrea loved it. So I encouraged it. If we're having trouble, I'll say, "Andrea, will you help us out here?" The bottom line is she was ready to start. When I look at kids and education, I look at it as- until they're ready, mentally and socially, and self-image wise, until they're ready to succeed, there isn't much I can do other than to provide a petry dish. And if nothing grows, there's nothing you can do about it.
- …some just may not get it (in reference to high-stakes testing). And I don't know what you do about that. I don't understand how accountable you could hold one teacher for teaching a child that comes ill-equipped to class, unmotivated, doesn't do homework, doesn't do the assignment.
- You know, you have X amount of material to cover. And unfortunately, that' s the way it is. You know and I know in an ideal world, you let each child move at his own pace. But then when you're saying, "Okay, these are you're objectives and you've got to cover these this year," then you have to keep your pace (right) to do that.
- Well, if the student continues to do poorly, they give up quickly. You know, if you can keep them encouraged, and let them see some improvement, then they might work a little harder.
- Um, two years ago, I had about five or six LD students, one who was physically handicapped, and others. They could not finish tests in a set period of time.

- ..if you show them that you have different avenues of assessing them, your attendance is gonna be up. It used to be 50%. .. Right now I been showing about 80. I'm about 80% everyday with children in my class. We have a lot of hall walkers here. We have a lot of children that just don't come to school. Okay. I think we average about 250 absent a day.
- Who knows in the life of a teenager what's going on from minute to minute, day to day. So to me, the goal is to try and get the kid to see that they can succeed. And, if they get a chance, to go for it. And try and make your grade so that that happens.

Student Home Environment One of the major classroom realities teachers faced was coping with student frustrations when the students perceive themselves to be in "crises." Many teachers found that student home environments could be very disruptive and non-supportive of schools and learning. Working on homework was found to be more stressful for these at-risk students, and concentrating in class took more focused energy. Parental expectations and support of student learning also impacted the learning and the grades students obtain.

- My kids from better homes almost always have better work ethics.
- Its really, really important that you know the kids individually as people and you have to know their stories. We had a child who had a very traumatic experience at home, that boy had so much going on in his life that it was unfair to judge the whole year and let the last four weeks of his life that has been totally out of his control, how could you say that that boy failed for a year under those circumstances. As a team we talked about it and decided we couldn't. We decided to ignore the last 3 weeks and look at what he had done for us before his world fell apart.
- And that ties into parental support, if the kids got parental support that works like a champ. If it doesn't have parental support, then it doesn't.
- I'd say I probably have 3 or 4 students every year where if I'm aware of the situation, like maybe…all but once it's been with young ladies where they've gone home and they're the primary care giver for a family. When they leave here, they go home and they take care of kids. So for them, I give them a break on the homework.
- …there are kids who have certain situations at home and I'll give breaks for that.
- ..if you put zeros in for homework, you can kill the grades rather quickly.. because..um, again, the outside situation, the home, atmosphere, sometimes homework's not really even possible.

Student Attitude and Behavior The reality of poor student attitudes and inappropriate behavior, especially in remedial and standard classes, seemed to have both a direct and an indirect impact

on student grades. These quotes from the interviews capture the essence of this classroom reality:

- Because one of the biggest problems I have with assessment is finding out whether I'm assessing the child's attitude or the child's ability.
- Depends on the class (in reference to grade distribution), if I'm teaching 2 classes, kids at the same ability level. Once class I have a class average of the high 80s. The other class at the same ability group with a different personality in the class, my class averages about 68. I teach the same material, no class is ever the same but basically the same techniques, evaluations, things, and in one group just the chemistry in the class; I've got too many cut ups and they run the class and not the academics.
- Some of them are quite bright but they have such behavior problems that they never get learned what they need to learn.
- …he's got an attitude, he half does his work, he's my C student.
- And it's all a function of focus. One the kids come in, they work, they have a good time, they succeed. The others we spend all our time with distractions and just trying to create a classroom atmosphere where we can teach.
- Given these remedial classes, there's no way they will pass it (SOL test), unless they make a total 900% change in their attitude and in their behavior, they're not.

Mainstreaming, Social Promotion, General Students in College-Prep Classes Several teachers complained that the ultimate effect of social promotion and putting general students in college-prep classes had a "watering down" effect on the curriculum, expectations for student success, and, indirectly, the types of assessment given. These excerpts embodied those complaints:

- And I have a few F's and those are mostly kids who are mainstreamed. And that's where they have trouble with me, I meet the IEP but I'm not going to give a 5th grade child a C when they don't know 4th grade objectives.
- I have some of it because they have been socially promoted for so long they think well you know, it doesn't matter if I do it or not I'm going to be promoted anyway… and they have been.
- I am getting quote "general students" in a college preparatory class. And, I'm trying very hard not to water it down.
- Some of these kids have been placed in 6th grade so it's starting to catch up to them and somewhere along the line they have to be held accountable.
- They will likely come up with an alternative program for the children (who don't pass SOL tests) – they need some apprenticeship programs or something because all of these kids are not going to pass algebra and geometry. They are just not. Hopefully, they can find some training for them. The way the system is set up now, everybody suppose to go to college but everybody is not college material.

Test Anxiety Test anxiety seemed to plague at-risk students to a larger degree than the remaining student population. This inordinate fear of test taking had a direct impact on the type and timing of assessments, and both a direct and indirect affect on grading practices. Almost every teacher interviewed mentioned some type of concern about test anxiety or student dislike of testing in general. The following excerpts are examples of teacher comments:

- …children are very fearful of tests that everybody gives like the end of the year test.
- …many of them are fearful of tests.
- …Children who don't test well, a test is a horrible thing.
- …required nine weeks tests that we have to give and for non-advanced students, it was a very stressful experience.
- A lot of children get all choked up because they're not sure how the teacher tests.

Absenteeism Student absenteeism directly affected teacher decisions about missing grades, giving zeros, and make-up work:

- They have been absent, they didn't do anything to make up the work that they missed.
- And look at the attendance. How is a kid like that going to pass?
- …and also schools now-a-days you have so many absences. And it's very difficult keeping up when you have 75 children, very difficult keeping up with missed quizzes.
- I give them a little schedule: if you're absent one day, you should have your work made up within a day. If you're absent two days, then you can have three days to get it all done. And so forth…
- Sometimes our class role, I see a student on there and I'll say to the computer lady, I say, "Lady, I haven't seen this student, it's a ghost". "Well, it's supposed to be in your class." So the only thing, you're failing students that you've never seen.

External Factors

External factors were influences that originated outside of the classroom and were not directly manifest in student behavior, such as home environment. Like some classroom realities, external factors were not under the control of the teacher, but still impacted the nature of classroom

assessment and grading practices. Three major external factors were identified: 1) externally mandated statewide learning standards (Standards of Learning in Virginia) and externally mandated, mostly multiple choice, high stakes tests (SOL tests in Virginia), 2) district grading policies, and 3) parents.

SOL and SOL Tests Since the SOL and SOL tests have had a great influence on teachers in general in Virginia, the intent here was to focus the teachers' thinking on how the SOL tests affected their classroom assessment and grading practices. The teacher comments indicated that the SOL were, in fact, impacting their classroom assessments and grading. This was, typically, not a radical or far-reaching influence. Rather, the SOL tests provided an "external" reason to modify their classroom assessments so that they covered more of the SOL, and, to a lesser extent, so that they used the multiple-choice question format to a greater extent. Using more multiple-choice questions would better prepare students for the SOL tests. Teachers seemed to feel resigned to making these changes and suggested that without the SOL tests they probably would not have made the changes. The comments below capture these perceptions of the teachers. In the comments, it is evident that there is tension between what the SOL and SOL tests suggest should be assessed, and how, and the assessment approaches of teachers based on their own beliefs.

- I use teacher made tests because I feel like I'm the one who has taught it and I know what I'm looking for. But at the same time I'm going to make it up according to the SOL that we have to follow.
- What they did was they [SOL tests] defined it [classroom assessments] ... in math most of them are not multiple choice tests, but I give them more multiple choice so they can get used to it ... with a multiple choice test I don't think you get an accurate evaluation of the students' knowledge
- I think the teacher has to teach both for the SOL test, which is a necessity today, but you can't forget a lot of other things ... you have to have a balance of both.
- I do it sporadically so it's familiar to them, but it's not my general way of doing things.

- As far as changing my grading practices, probably it will change my assessments somewhat. I've got to make myself do more multiple choice questions.
- We're testing more often, we're giving samples of standardized tests, multiple choice tests.
- On my wall over there is SOL and I know exactly what's got to be on that test because we have practice SOL tests that we've been given to pre-assess the students. So assessments are beginning to drive my lesson plans.
- Assessments are now not just to know (what students know), but to prepare them to have test taking skills.
- It is a good thing in terms of having them ready for standardized testing.

The following comments show how some teachers have changed their classroom assessments to conform to the SOL, even if they did not believe this was in the best interest of the students. The impact was undesirable because it means content not on the SOL tests is much less likely to be assessed or emphasized. Here assessments were driving instruction, and to the extent that the classroom assessments were influenced by the SOL and SOL tests, the greater this external influence had on teacher practices. Conflict also arose between assessments that teachers believed gave them greater understanding of student knowledge, typically constructed-response items, and multiple choice tests, which were viewed as limited in what they told the teacher.

- I think you're doing the children such a horrible disservice when you teach the SOL tests because you leave out so much wonderful stuff that some of these children will never get anywhere else.
- I am opposed to the SOL testing, it just doesn't leave any room for individualization on the part of the teacher.
- They [multiple choice tests] don't always tell me what I want to know.
- I like constructed answers because you can go back and show the child where they messed up, I guess multiple choice measures it the child knows or that the child is a good test taker.
- You know frankly, with few exceptions, if we didn't have to get ready for standardized tests I'd probably seldom use multiple choice as a format.
- I'll tell you that this year has been very different from the years past because I always gave tests and quizzes that required show me the work. I didn't give multiple choice

tests. Because the students now are required to take these SOL tests, now I'm mixing ... some multiple choice and some show me the work ... yea, outside forces control me.
- This year with the SOL coming in a lot of revision is needed.

District Grading Policies Each teacher was asked about the effect of division grading policies on their grading practices. While each division has such a policy, it was evident that teachers use such policies only in a very general way, and that their own approaches and preferences were much more important. This contributed to greater diversity of grading practices among teachers. In some cases teachers completely ignored division policies.

- Fifty percent or less [is driven by the school or division policy].
- It's my decision as to how I interpret school policy.
- I am somewhat compelled to go with our numerical system with the county.
- I go with my own judgment also; a little bit of both to be totally honest.
- We got one [division policy] this year. I was furious about it. I'm finally getting some things right after 30 years, and they told me I couldn't do things ... it's not the grading, it's the process of learning.
- I think they [division] are more concerned with you having enough grades every 9 weeks.

Parents There was little parental influence on the nature of assessments, but clearly teachers were influenced by parents in the grading system they use. Teachers wanted to be able to meet with parents and provide reasonable explanations for the grades they have given. The most important factor was having sufficient justification for grades to avoid parental conflicts. For some teachers this meant using very specific, "objective" scores and averaging, while for most teachers there needed to be a sufficient number of grades to show clear patterns.

- To me the calculator is the deciding factor ... I can sit down with any parent or any kid ... it makes my life easy, because I punch the buttons, hit the equal sign, and there it is.
- When you're going to show Johnny's mom why he got a B, you won't have a lot of reasons to show his mom if you only have one test out a nine weeks.
- Parents were a bit more prone to suing teachers ... as a result we had to develop our own objective ways of assessing students' academic performance.
- I don't give A students a C without their parents knowing ... challenges come from a lack of communication between the parents and teachers ... I bring parents into the process on the first day ... talk to my parents all the time.

- I'm very up front with them on how I do report card grades ... I tell them that when they get report cards they will be based on objectives and how well students met them.
- Pretty iron clad, does not leave any room for any subjective evaluation at all. It saves a whole lot of arguments with parents.

Decision Making Rationale

Teachers were asked repeatedly to provide a rationale or justification for *why* they made their assessment and grading practices decisions (e.g., why the types of assessments used, why specific factors used in grading). Overall, there was great difficulty and some uneasiness in the responses of the teachers. They found it difficult to provide an explanation, particularly if they had been teaching for many years. One general assumption seemed to provide a foundation or basis for their rationales. It was apparent from the interviews that teacher decision making was a highly individualized, idiosyncratic process. Thus, no two teachers were alike, and the comments suggested that they believed they should not use the same assessment and grading practices as other teachers. Furthermore, with some probing, five additional factors emerged from the categories as significant in identifying the reasons teachers give for their assessment and grading decisions: 1) the nature of learning objectives, 2) using a wide range of practices, 3) the importance of constructed-response assessments, 4) professional experience, and 5)homework.

Nature of Learning Objectives Many of the teachers indicated that the nature of the learning objective would determine the choice of assessment method. Simple recall knowledge, emphasized through drill and memorization, would be assessed using selected-response items, such as multiple choice or true/false, while objectives emphasizing thinking skills, such as application and reasoning, would be assessed with constructed-response assessments, such as essays and performance assessments. The following excerpts show the influence of objectives and topics.

- Well it depends on the topic sometimes, for example, I just finished the objective on surface area and volume and in that case I do a lot of handouts and worksheets. With learning definitions I'll do matching, multiple choice type items. So a lot of times the topic will determine the assessment that goes with it.
- The manner that I assess tends to be more related to the subject matter that I am teaching … with teaching grammar, just multiple choice items type things for that because there is some memorization involved.
- I do some grammar quizzes, we are going to have a grammar test, they're really sporadic because it really has to be revealed in their writing.
- It depended on what were covering as to how we needed to assess them.
- Pop quizzes that they don't know about that I usually try to give them to get an idea of whether or not they understand the material.
- I try to assess at the point that I feel pretty confident that the children understand the material. That's the point at which I assess.

Using A Wide Range of Practices A second finding was that all the teachers believed that they should use a variety of assessment methods and multiple criteria in grading. This may reflect the conflicting influences of internal and external factors, but may be based mostly on the belief that multiple assessment methods were needed to "fairly" assess students so that all were able to demonstrate what they had learned. It was also consistent with the "pulling for students" belief that advocates using whatever assessment best matches with student styles and strengths to give the best performance. Notice in the following comments how assessment practices are both varied and influenced by the nature of the students.

- It's what I feel like the kids in that particular group, how I'm going to find out what they know in the best way … some students do better on paper than they do orally, some students do terribly on paper but you know that they know it so you have to come up with a way to say show me what you know. My philosophy is I'm trying to get them to show me what they know.
- I use a little of everything.
- Day to day, observation, the almighty observation. You're listening, oral presentations, looking at a project, at a test score, it's everything that a child can give you.
- They [assessment practices] change based on the needs or capabilities of the students. I'll make some tests easier and some harder depending on the ability level of the students.
- You have to adjust [assessment practices] to where you are.
- I tend to rotate they types of assessments so that they have a lot of different types.

Importance of Constructed-Response Assessments It was clear that the vast majority of teachers preferred constructed-response assessments, where students "show their work" (e.g., short answer, essay, performance assessments, demonstrations, exhibitions, portfolios). The teachers indicated that these kinds of assessments gave them the best indication of whether students truly understand and could apply what they had learned. This is consistent with the internal belief that assessments should serve instruction by showing what students understand. Caution was indicated in the extent to which objective assessments can provide sufficient evidence that students actually understand, as compared to memorization. Here are some illustrative comments:

- Whereby I use rubrics to score a lot of their projects, I also try to do as much hands on as possible.
- Observations, rubrics, anything that will show you a measurement of a child's performance level.
- I like the rubrics. Just because it allows for more creativity on the child's part. It seems like they are giving me more information.
- I use written open format evaluation. I occasionally use matching and multiple choice. I do a lot of personal anecdotal evaluations. In other words, live performance tests.
- I might start with a quiz and then if it was still unclear then I would go to a personal one-on-one oral assessment or a task assessment … a project type of assessment.
- I have some multiple choice, personally I do not like those, I would rather have free response because then they have to put down exactly what they know.
- I always use rubrics … and when we do book reports, or any product based outcome, when we're building or making something … we use the rubric.
- My tests are for the most part essay … generally really thorough and quite long … all the kids have to write three essays.
- If I teach geography, the way I would assess that is to give them a blank map.

Professional Experience Teachers' experiences have evidently had much to do with determining their assessment and grading practices. Whether by trial and error, or by talking with others, it seems that the teachers learned through their own experience which assessments and grading approaches worked best for them and their students. It is as if the practices simply evolved over

time. One thing that was absent in their comments was any indication of influence from either initial teacher training or subsequent professional development opportunities. The following comments illustrate the importance of experience:

- I've taught for twenty some years and I guess some of this just evolves over the years.
- I had to figure out what to do. Sometimes you talk with other teachers and find that they are doing different things, but I don't know that I have talked to any other teachers who are doing what I do. It sort of came upon me … trial and error would be the best answer, which would put it all in a nutshell … like a lot of things, once you do it for a long time you sorta get a feel for it.
- Test experience, what was done with me in high school.

Homework Finally, one common thread among most teachers was the importance of homework. It was indicated that homework, much like quizzes, provided the teacher with an immediate indication of student understanding. Homework also was important to student learning. Most teachers believed that homework was essential practice in the skills. In this sense, then, homework provided an added learning activity and an indication of understanding. Here are a few comments indicating the importance of homework:

- I weight [grades] more on homework, say around 40%.
- I found out that if a student starts homework in class … [put] homework assignments on the board and go over them … you ought to be able to help them.
- I give what I call a mini quiz every day. That's o the last night's homework.
- I'll teach a lesson, they'll have a homework assignment, they bring it in the next day and we'll check over it and I'll check and see who has it because that way then you get something wrong on the homework, I expect them to ask questions.

Assessment Practices

Based on beliefs and values, the reality of their classroom environments, and on external influences, teachers select and implement specific assessment practices. The variety of different types of assessment used reflected teacher beliefs that informal, observational assessments, and constructed-response assessment, were best for gauging student understanding on the one hand,

while external pressures tended to result in more objective items. As a result, most teachers used a variety of assessments, individualized to their students and based on their own experience and the nature of the learning objectives. This included homework, quizzes, tests, performance assessments, and participation. Using different kinds of assessments also allowed more students to show their best work. Several factors concerning assessment practices emerged from the data, including formative assessments, pre-assessments, revisions of assessments, and construction of assessments.

Formative Assessments From teacher responses it was evident that some assessments were more informative than others. The daily checks and observations, more formative or informal assessment, were clearly most informative for the teachers. This kind of assessment was ongoing and continually informed instructional decision making. Here are some examples of what they said about the informative nature of assessments:

- My informal assessment is [most informative].
- Daily quizzes. Yes, especially with daily quizzes as a check of previous day and use quiz to go over concepts as needed.
- Ones where students apply what they've learned [are most informative].
- Daily quizzes [are most informative] … gives daily pulse of learning for the teacher.
- Quiz, graded by both teacher and student [is most informative]. Gives a quick overview of class progress.
- Well, definitely the free response over the multiple choice … sometimes the group assignments I give … also listening to them talking in groups.
- Using a rubric with very specific guidelines [is most informative] for me and them [students].
- Probably I can find out a whole lot more in oral. Asking them to explain something to me … and just watching them on a day-to-day basis.
- Probably the tests. Because like I said, you can pretty much realize that they have been able to master larger chunks of information that's opposed to isolated things.
- Almost always for my purpose it's the writing assignments that I spend in the rubric [that is most informative].
- Class work assignments [are most informative] because they are one in class under supervision.
- Projects most important, also papers.

- Homework and class participation.

Pre-Assessments Another area that was brought up in the interviews was the nature and use of pre-assessments. It was clear that most teachers used some kind of pre-assessment. This was usually in the form of an informal review of current student knowledge, understanding, and skill, done through classroom observation, short quizzes, and through question/answer sessions. However, some teachers actually gave formal pretests. Also, some teachers interpreted "pre-assessment" to mean "expectations," which they tried not to make. Finally, pre-assessments were affected by subject matter and experience. In highly sequenced subjects, such as secondary mathematics, there is less pre-assessment. The more experience a teacher had, the less likely he or she was to use pre-assessments.

Here is a representative sample of comments of teachers regarding pre-assessments:

- I'd rather judge on what they are doing, not on a standardized test.
- I do pre and post-tests three or four times a year … if you don't do your pretest in the first or second week of school then you can just hang it up.
- If you preassess then you're going to be able to plan better and you find out student needs.
- I also give them a pre-assessment.
- I always assess early on to see what people know so that I could split groups basically and remediate or accelerate as needed. I am a real stickler to assessing only to find out what people know.
- Informally, usually in beginning a unit.
- Not so much in algebra … mostly new material … find pre-assessing discouraging because so much is new.
- Pretest to find location that class is in to start the year.
- Not as much as I probably should … I used to give a pre-assessment of grammar just to see where they were … they were all over the place.

Revisions of Assessments Teachers were asked to comment on the extent to which they revised assessments, when the revisions would be done, and the nature of the revisions. Almost all of the teachers indicated that tests and other assessments are revised both from year to year and

from one week to the next as the testing date approached. This constant revision process was done because students changed from one year to the next, because the content of what was covered changed somewhat, and because, in each class, there were special circumstances that affected what should be tested. This further supported the teachers' need to adjust assessments to individual differences of students and to the objectives being covered, all in the goal of pursuing increased student learning. It also pointed to a significant time commitment for teachers.

- Every year it's different … I don't think I've ever used the same test two years in a row on anything.
- The only thing that has stayed the same is the spelling quizzes … I change everything else … I keep a copy of it so I can see the change.
- You modify everything. If everybody fails the test then I modify it because I've done something wrong … I try to write and revise tests students take within the next two days.
- Why are they revised? Because the results that were found on previous tests were not satisfactory, did not show student performance.
- I usually change them pretty much each year.
- I rewrite them every year, maybe not entirely, I'll use some parts.
- When I grade a set of papers and there is something there that the children are not understanding, I go back and revise the assessment … so there's a constant revision process going on.

Construction of Assessments Teachers used both locally developed assessments and assessments provided by publishers. Overall, the teachers clearly relied most on teacher-made tests. Publisher's tests were not as widely used because they did not address local contextual factors such as what was covered and the characteristics of the students. Note how the following quotes emphasized the importance of teacher-made assessments:

- Over the whole year generally, I do teacher-made tests.
- I use teacher–made tests because I feel like I'm the one who has taught it and I know what I'm looking for.
- Sometimes I will pull questions from a pre-made test but I don't generally like to give an entirely text book made test … I don't tend to teach things like they are presented in the book, so I make them [tests] up.

- Some of them I create myself, some of them are from the text. When I take them from the text, I very rarely give the whole thing, I usually do bits and pieces and kind of paste and put together.

Grading Practices

Grading practices represented an interesting mix of results from assessments, teachers' beliefs and values grounded in their classroom environments, and overall learning goals. In addition, there clearly were external factors, such as division grading policies and parents, as well as teacher beliefs about motivation and engagement, that influenced the practices. What resulted, like the nature of assessments, were individualized approaches that take these considerations into account with the types of students in the class. In discussing grades, several factors emerged as significant, including grading policy, borderline grades, how effort was handled, how extra credit was handled, grade distributions, and how zeros were handled.

Grading Policy Regardless of division or school policy, each teacher had a unique, idiosyncratic grading policy. However, there were some common elements. First, all teachers obtained many grades from primarily four sources: homework, quizzes, tests, and projects or papers. Some teachers also utilized participation, class work, or some other indicator of effort. Interestingly, tests typically did not account for more than 30% of the final grade. Teachers indicated that they used a criterion-referenced approach to grading rather than a norm-referenced approach, and a total point system that provided percentages consistent with division guidelines. An interesting issue was whether the teacher used students in the class or grade level objectives as a frame of reference for giving grades. That is, it was possible for students to receive As if they learn a lot, or receive Cs for the same level of performance if what they had achieved was below grade level.

- I rely on tests only 30%; class work 65%.

- I'm not a believer in having a bell shaped curve for grades … if in a class nobody's trying and I only have one or two Bs and the rest are Fs, that's exactly what the assessments are going to be.
- If I have students who are working on the first grade level they necessarily get Ds and Fs on the report card where I'm grading 3rd grade objectives.
- They give me objectives … I always to way , way beyond those.
- They have 13 grades, I drop the 3 lowest … I figure everybody has an off day.
- I'll have more grades than I know what to do with.
- I give quizzes and tests and I work on a point-total system
- I would break the quizzes, tests, and homework into a percentage grade.

Borderline Grades Every teacher faced decisions concerning grades that were borderline. Teachers in this sample indicated that, in these situations, they wanted to be able to give students the benefit of the doubt (pulling for students), and typically used non-achievement factors for making their decision, such as effort and participation, or used extra work or extra credit. This reflected the teachers' desire for students to be as successful as possible and to obtain the highest grade possible. It is usually a subjective judgment by the teacher. Here are some illustrations of what teachers did with borderline grades:

- I will suggest that maybe they do something extra, which could be a project … I tutor with them … I'll give them make-up work because usually they don't even ask for make-up work they missed. It depends on the situation, but I do what I can to try to help them over the hump.
- Borderline comes down to effort.
- Borderline, effort is the key … can make up zeros or use extra credit.
- If they come in and say they got a 60 the first time and they come in and get a 85, then I'll up that to a 75 or something.
- An F is a 63, those kids get 60. I will pass them especially if they've really showed me the effort … if I know they're really trying and I mean, genuinely, then I will pass them.
- If I'm within a point or a point and a half of the next letter grade, I look at the child and do I feel the child has made an effort?
- When it's borderline, how hard has the child worked in the year? And I will be honest with them, it it's a 63.5, I'm going to bring it up to 64.
- Borderline, most of the time I round up … I'll give extra points to someone who really works hard.
- Reserve A for performance, B for effort is possible.

There were a few teachers who clearly did not want to use subjective criteria for borderline situations:

- Frankly I tell them that when they get report cards they will be based on objectives and how well people meet them. How can I grade on effort?
- The calculator decides [borderline cases] … to me, I round up half a point … I try to set up the system where I don't have to make evaluative judgments.

Student Effort One of the most varied practices in grading students was concerned with how the teachers recognized and handled student effort. From one standpoint, most teachers used effort to some extent in deciding borderline cases, giving a student who tries hard the higher grade. Many teachers viewed effort as enabling achievement or as part of achievement, so that it became an important contributor to determining grades. Some teachers did not use effort at all, relying instead solely on the quality of student performance. Many teachers thought of homework as a proxy for effort. The following quotes show how different teachers had different ideas about how to handle effort.

- At this level you have to take into consideration effort but it can't be to the exclusion of performance because it's a fine line.
- I have one child I think is getting a D and she had worked like a dog and so we really just bumped her up to a C.
- As far as an effort grade, I don't really believe in effort grades but, well, homework is a good example, I give an effort grade for having homework everyday.
- Most projects there is usually a window where I'm grading effort. I can tell that some have been working really hard and I'm going to give them the benefit of the doubt …there is one girl that tries really hard and all she can get is a high F, and I give her a D every time. I will not fail that girl.
- I want to see that there were sincere efforts. When I look and see that a child's missed eight out of ten homework assignments … he decided just to sit there and not do them … that's what I measure as not sincere efforts.
- I put effort in their class participation grade. Some students sit there and don't say a word. I factor in not only their actual class participation, but also their effort, what I perceive is effort.

Extra Credit Teachers were asked how they incorporated extra credit in grading students. Most teachers used extra credit primarily as a way of boosting the grades of students who were

borderline or receiving a low grade (pulling for students). There were many different ways extra credit was used. Some teachers made it relatively easy for students and had an informal set of guidelines, while other teachers believed students must clearly earn the extra credit with additional effort. Another variable with extra credit was whether students know about it and can plan for it, or whether the teacher simply awarded extra credit as a surprise. Both approaches were used. Many teachers offered ways to earn extra points as extra credit. Some comments of teachers about extra credit were the following:

- I tell them they can have extra credit when they have done what they have supposed to do for credit. Make them learn and see that they have to put forth some effort. I think too many kids get by today with not earning what they get, and that's an important lesson.
- If somebody does extra credit and it doesn't indicate better performance, then no I'm not going to give them anything. There's no like free points. I always retest everybody who gets Ds and Fs, and I'll throw out the old one. I will always give people a chance to improve, why not?
- The things that motivate my kids is they'll put so much more effort into the extra credit than they will the regular work. They love to see 75 + 10.
- If it was a particularly hard homework question, the ones who got that when I go around … I give them extra credit. They never knew that part ahead of time.
- I rather them do the assignment themselves rather than give extra credit. But what I do is offer bonus points, which, I guess is almost the same. For example, just things like taking home papers to get signed if they bring them back.
- It's worth a few extra points if they're willing to show things to their parents to keep them abreast of what's going on in the classroom.
- I don't give extra credit. I tell students that you earn your grade … you don't come in at the last minute and ask for a bail out … [but] we do have extra assignments that are optional that you can do to earn extra points.
- They get two make-up assignments; that's the extra credit.
- Sometimes I'll give them an extra credit problem or a project or something like that.
- I have one class when they have to bring their report cards back signed they'll get 3 or 4 points.

Handling Zeros A vexing problem in grading students is how to handle zeros. Our teachers reported a variety of ways that zeros were used. Teachers generally understood the devastating effect a zero can have on grades, and most teachers tried to accommodate students by providing

opportunities to remove zeros (pulling for students). Some teachers used zeros for motivation. Generally, a zero was intended for no work at all, not for receiving an F. Like other assessment and grading practices, zeros were handled in ways that make most sense for individual students, despite the presence of a single policy.

- A zero means you didn't do the project at all … an F means you did the work and you deserve some credit. For the most part I try not to let the kids get a D or F, I have what you call do-overs.
- If they [students] just got one zero, I mean I'm lenient enough. They are not going to figure out the percentages anyway, so I can fix it then.
- I put the zero in at the end of the nine weeks if they just haven't turned anything in … I try to make sure they have an opportunity to make it up. I know a zero will kill their grade and they don't understand that.
- I have a lot of grades, so one zero does not make a great deal of difference … it's all done in percentages so at the beginning it has a heavy effect … I do not give them a chance to make it up.
- It [zero] counts as a regular grade. One of the things I discuss when we are covering means is that every zero counts, don't miss assignments and think you're getting over, you're not.
- Oh, I record them [zeros] to start with, but I don't know. Maybe this is the dedicated teacher's syndrome or whatever. I'll chase the kid around for a long time so that I can get a few points. I have a child now who is absolutely and A+ student. She hasn't turned in her last writing assignment … so it's dropped her A+ to a C- … I've hounded her every single day.
- I don't give a zero … it's murder for a child to make up. There are people that give 0's and it just turns the kids right off.
- I cannot change a grade … the zeros stay there … the zero stays if they don't make it up … there's a lot of stuff I want to broadcast, but I just can't turn them down when a kid comes to me.
- It's very straightforward. They are just average in and if there are mitigating circumstances then I would take that into consideration.

Discussion and Conclusions

The result of these analyses indicates that teachers have a lot to say about their idiosyncratic assessment and grading practices. It appears that teachers are constantly striving to reach a reasonable balance between their beliefs about education and learning on the one hand, and the realities of their classroom environments and pressures exerted by external factors on the

other. This constant state of tension may help explain why teachers view assessment and grading as a fluid set of principles that change each year. Together, these influences converge on the actual process of making assessment and grading decisions, which result in the development and implementation of assessment and grading practices. Because of the interplay between the teachers' beliefs, external factors, and student/classroom characteristics, a great amount of variety in classroom assessment and grading is evident.

Important teacher beliefs that influence decision making include a larger philosophy of teaching and learning, wanting students to succeed, accommodating individual differences among students, engaging and motivating students to learn, and promoting student understanding and mastery. These beliefs converge on getting students, in whatever ways are necessary, to be involved in learning, to try hard, and ultimately to demonstrate successful performance.

Relevant characteristics of the teachers' classroom environments which impact both assessment and grading practices include student home environments, student attitudes and classroom behaviors, mainstreaming and social promotion, test anxiety and absenteeism. The reality of the classroom environment generally tends to moderate teacher decisions about their assessment and grading practices.

Important external forces include the statewide standards and high-stakes tests, district grading policies, and parents. Clearly, the most important external factor for this sample of teachers in the state of Virginia are the SOL and SOL tests. These tests have put pressure on teachers to modify their assessment practices to accommodate the SOL and the selected-response format of the SOL tests.

One impression is the strong sense of ownership teachers have for their assessment and grading practices. It is almost as if there is a sense of pride and ownership that the practices are

unique, and that they have a good rationale for them. It also seems that assessment and grading is largely a private matter, not discussed very much with other teachers. Clearly, assessment and grading practices fit within a larger philosophy of student learning, and teachers are very interested in and committed to enhancing the learning of each student. They want students to learn. It follows that they want assessment and grading practices to enhance student learning, not simply document student performance.

Assessment practices that emerged from the interviews stressed the wide variety of assessments used for different purposes, and the need for different types of assessments to accommodate student learning styles. Formative assessments are used constantly during instruction, and information from these were used to inform teaching decisions. Pre-assessments are sometimes used prior to instruction to gauge current student knowledge. Revisions are made continuously by teachers, who usually feel more comfortable constructing their own classroom assessments for students.

Grading practices were very idiosyncratic. Teachers adopted their own grading policy, with little regard for standardization with other teachers. Most teachers used effort as a determining factor in borderline grades, and, in general, believed that student effort is a good proxy for student achievement. Extra credit was used to help students obtain a higher grade. There was great variety in how zeros are handled.

An important finding from these data is that classroom assessment and grading are integrated with instruction. Most teachers see assessment and grading as extensions of instruction that have important consequences for student engagement and motivation. Thus, thinking about how the assessments will enhance student learning heavily influences teachers' decision making. Teachers believe that learning is best assessed with multiple assessments,

using different formats. They also believe that informal or formative, and constructed-response assessments, provide the best information to judge student understanding.

Our goal in this study was to "get inside the head" of teachers to find out what influences their decision making concerning assessment and grading practices. We have learned that decisions are made on the basis of how assessment or grading procedures will affect student learning and motivation, while, at the same time, responding to the realities of their classroom environments and external pressures. In this balancing act, each teacher has his or her own solution, one that is constantly changing with each new group of students.

Implications

The results of this study suggest several implications. First, given that teachers clearly "pull" for student success and use many different practices that help students succeed, it may be helpful to ask if teachers are "coddling" students. "Coddling" is defined as making it so easy to obtain passing or even high grades that students may get a false sense of their own level of understanding and performance. In other words, is the desire of the teacher to see student "success" so strong that it promotes assessment and grading practices whereby students can obtain good grades without really knowing the content or being able to demonstrate the skill?

Second, what are the results of emphasizing effort as much as teachers do in grading students? Research on student motivation and attributions for success (reasons students give for their success) suggest that an emphasis on effort is positive for motivation because effort is a controllable, internal factor. Also, this emphasis on effort may teach some students the importance of engagement and involvement and the need for this involvement to be successful. However, it may be counterproductive for some low performing students because they may

develop a belief that they are rewarded for effort and not mastery of the content or skills. This may also give students a false sense of their competence. Furthermore, too great an emphasis on effort could possibly reduce attributions to ability, which are more stable.

A third implication of these findings is the potential effect of external pressures on teacher professionalism. The influence of the state-wide high-stakes tests is undeniable, and seems to be directed at something that is very important to teachers' sense of what it means to be an effective teacher. Teachers desire autonomy and need to adapt instruction and assessment to their personal styles and to the needs of individual students. Teachers do not endorse standardization of practices that minimize these dimensions of being a teacher, and the SOL and SOL tests in Virginia have had such a standardization effect. The question is whether this, in fact, is affecting teachers' sense of professionalism, and if so, what impact this is having on teacher morale and motivation.

A fourth implication concerns teacher training and teacher induction. What do these data suggest with respect to how teachers are trained? How important is it for teachers to have a fully developed philosophy of teaching and learning so that assessment and grading practices can be based on this philosophy? What is being done in teacher training programs to help teachers become competent in the variety of assessment methods that are typically used, as well as how to integrate external pressures with personal beliefs and district grading policies? In the induction of beginning teachers, it may be valuable to examine their assessment and grading practices to see if they are consistent with their philosophy of teaching and learning, and other beliefs.

It is clear that teachers spend a great deal of time with assessment and grading, and that they see these tasks as integral to the teaching/learning process. This research helps to show how teachers make assessment and grading decisions, pointing to tension teachers feel when internal

beliefs and values conflict with their respective classroom realities and external pressures or demands. This understanding will hopefully suggest positive actions that can improve assessment and grading practices.

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